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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/580,843	05/26/2006	Yoshihiro Nakai	050395-0373	8680
20277 7590 05/02/2007 MCDERMOTT WILL & EMERY LLP 600 13TH STREET, N.W. WASHINGTON, DC 20005-3096			EXAMINER MAYO III, WILLIAM H	
			ART UNIT 2831	PAPER NUMBER
			MAIL DATE 05/02/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/580,843

Applicant(s)

NAKAI ET AL.

Examiner

William H. Mayo III

Art Unit

2831

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 May 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892) *
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08) •
Paper No(s)/Mail Date 05/26/06.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application
- ☐ Other: ____.

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in present PCT Application No. PCT/JP05/14028, filed on August 1, 2005.

Information Disclosure Statement

2. The information disclosure statement filed May 26, 2006 has been submitted for consideration by the Office. It has been placed in the application file and the information referred to therein has been considered.

Drawings

3. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

5. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Art Unit: 2831

6. The abstract of the disclosure is objected to because throughout the abstract it contains the terms "comprising", which is improper language for the abstract. The applicant should replace the term with the term —having—to provide the abstract with proper language. The abstract also refers to purported merits and speculative applications of the invention, which is improper content for the abstract. The applicant is required to cancel all references to purported merits and speculative application in the abstract to proper the abstract with proper content. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Matsui et al (JP Pat Num 2003-051219, herein referred to as Matsui). Matsui discloses a coaxial cable (Figs 1-6), which is superior in electrical characteristics, bending characteristics, and in terminal soldering properties (abstract). Specifically, with respect to claim 1, Matsui discloses a coaxial cable (1, Fig 1) comprising a core conductor (2), an insulator (5) arranged around the outer periphery of the core conductor (2), and an outer conductor (6) arranged around the outer periphery of the insulator (5) coaxially relative to the core conductor (2), wherein the Young Modulus of the core conductor (2) is

inherently 240 Gpa or more (i.e. all of the claimed structure of the core and the materials that the applicant discloses may comprise the core wire is disclosed in Matsui, and therefore must exhibit the same characteristics as the claimed invention) and an electrical conductivity of 20% IACS or more (i.e. copper exhibits 95-100% IACS, see abstract). With respect to claim 2, Matsui discloses that the core conductor (2) is a single solid wire (Fig 1) having an outer diameter of 0.01-0.2mm (i.e. $80\mu\text{m} = 0.080\text{mm}$, abstract). With respect to claim 3, Matsui discloses that the core conductor (2) inherently has a tensile strength of 2450MPa or more (i.e. all of the claimed structure of the core and the materials that the applicant discloses may comprise the core wire is disclosed in Matsui, and therefore must exhibit the same characteristics as the claimed invention). With respect to claim 4, Matsui discloses that the core conductor (2) has a plated layer (3) that may be Nickel, Tin, or Silver (abstract).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

Art Unit: 2831

2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsui (JP Pat Num 2003-051219) in view of Schafer (Pat Num 4,161,704). Matsui discloses a coaxial cable (Figs 1-6), which is superior in electrical characteristics, bending characteristics, and in terminal soldering properties (abstract).

However, Matsui doesn't necessarily disclose the core conductor being made of tungsten, molybdenum, tungsten alloy, or molybdenum alloy (claim 5).

Schafer teaches a coaxial cable (Figs 1-2), which is simple, inexpensive to manufacture, lighter in weight, smaller in volume, has higher reliability, and higher power handling ability (Col 2, lines 16-23). Specifically, Schafer teaches a coaxial cable (Fig 2a) comprising a solid inner conductor (16) surrounded by an insulator material (18) and a outer conductor (22), wherein the inner conductor (16) may be made of tungsten (Col 4, lines 9-13).

Art Unit: 2831

With respect to claim 5, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the coaxial cable of Matsui to comprise the inner conductor being made of tungsten as taught by Schafer because Schafer teaches that such a configuration provides a coaxial cable which is simple, inexpensive to manufacture, lighter in weight, smaller in volume, has higher reliability, and higher power handling ability (Col 2, lines 16-23) and since it has been held to be within general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. They are Sato et al (JP Pat Num 2001-023456), Hochella (Pat Num 4,180,699), and Mattos et al (Pat Num 6,124,551), all of which disclose various coaxial cables.


Communication

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Mayo III whose telephone number is (571)-272-1978. The examiner can normally be reached on M-F 8:30am-6:00 pm (alternate Fridays off).

Art Unit: 2831

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (571) 272-2800 ext 31. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



William H. Mayo III
Primary Examiner
Art Unit 2831

WHM III
April 30, 2007